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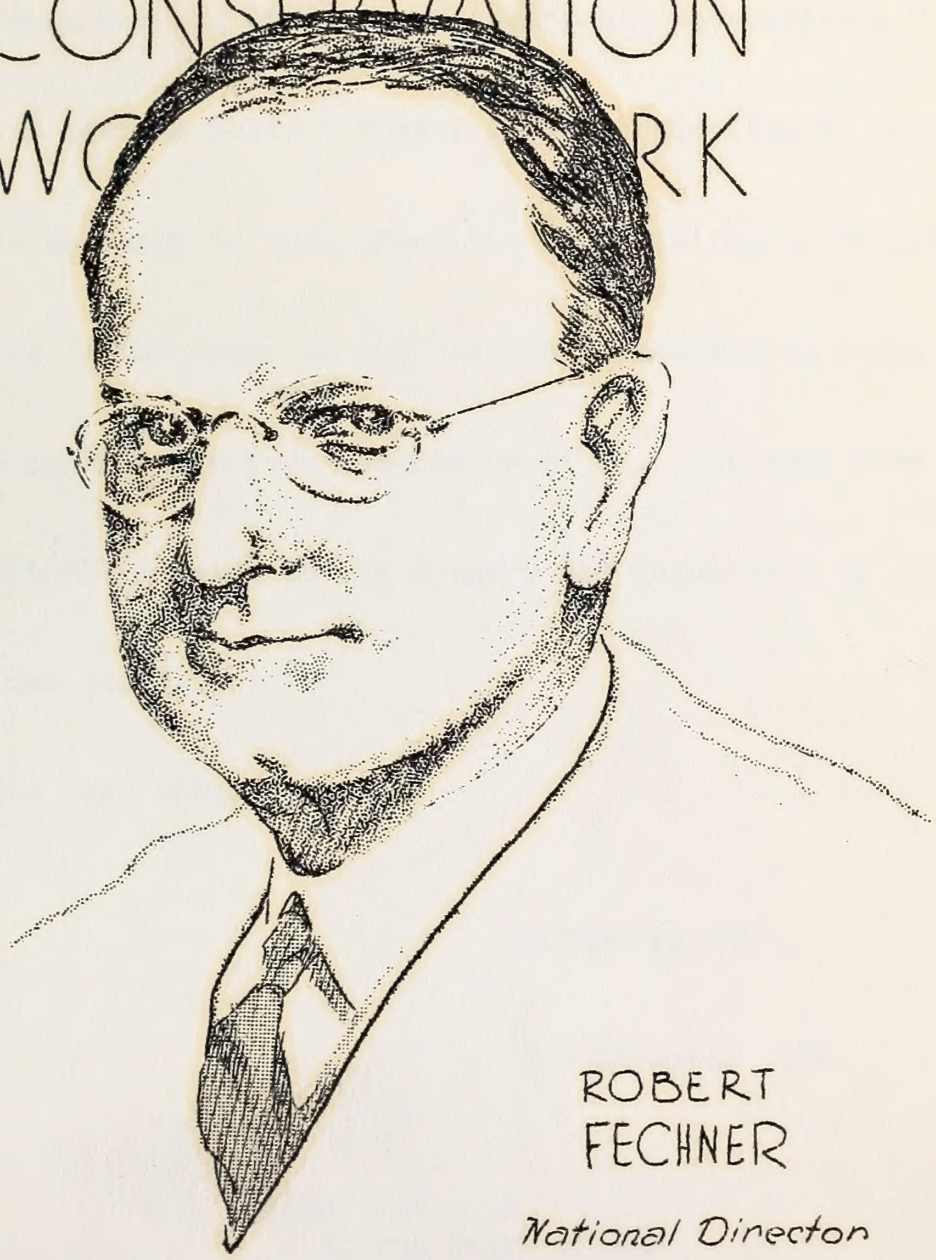


ROBERT
FECHNER

National Director

Featuring EMERGENCY CONSERVATION WORK, this New Year issue is also dedicated to Hon. Robert Fechner, Director.

N E W Y E A R G R E E T I N G!

To those many men and officials in Emergency Conservation Work who so kindly have sent me Holiday Greetings, I should like to say: Thanks! It makes me happy to understand the fine feeling of fellowship which has grown up in the ranks of the Civilian Conservation Corps and I know that I am included in your expression of it. You have done and and are doing faithful service to the country and yourselves by your work in forests and fields.

May the New Year bring you joy.

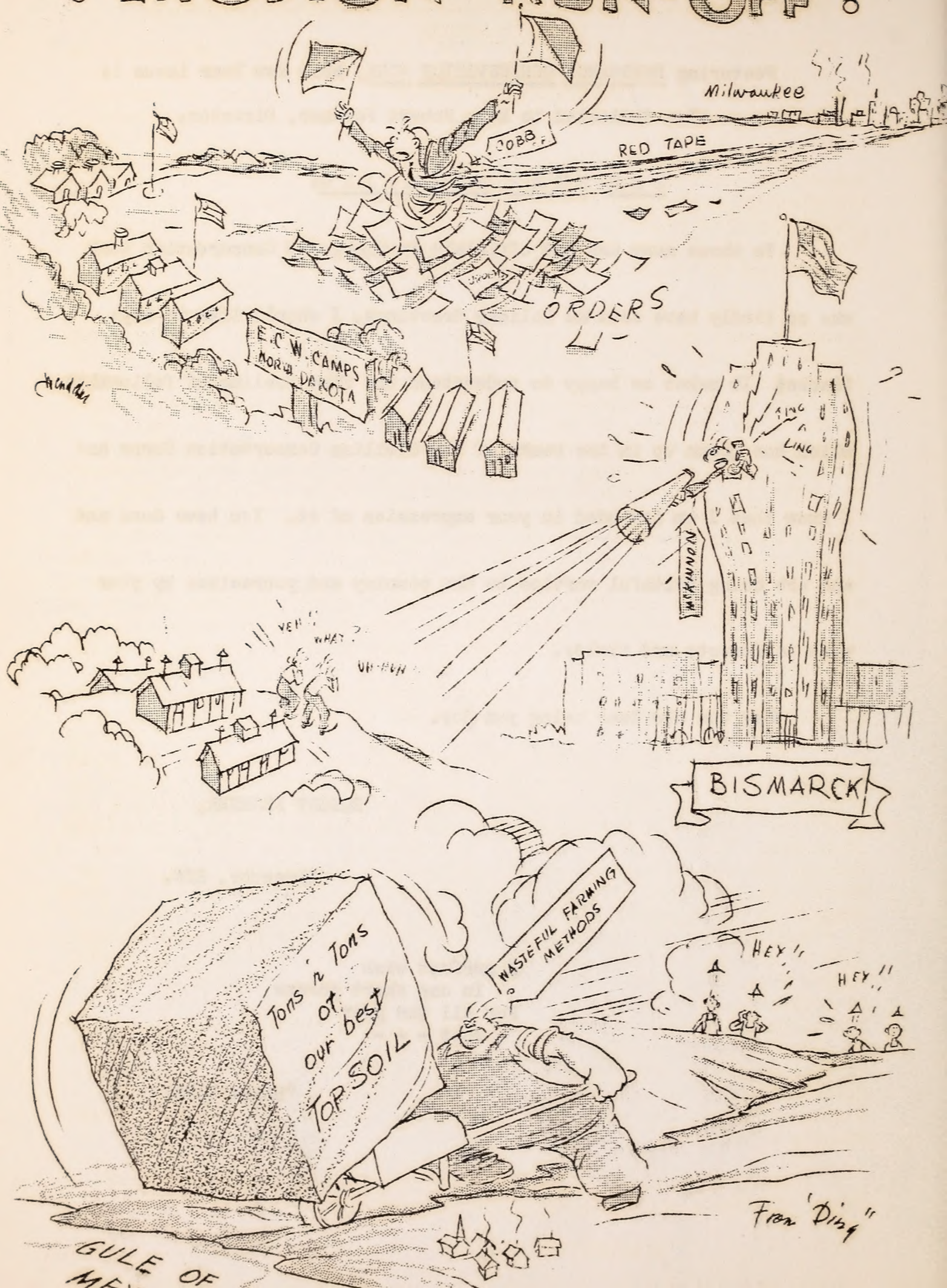
ROBERT FECHNER,

Director, ECW.

A perfect wish
In one short phrase
For all the year
Just - - -

"HAPPY DAYS!"

EROSION RUN-OFF



SOIL EROSION IN WISCONSIN AND MINNESOTA AND WATER CONSERVATION IN NORTH DAKOTA

L. C. Tschudy,
Supervising Engineer

Agriculture, broadly speaking, is the backbone of any nation with natural resources. Agriculture produces the major portions of all food and clothing. It is to the interests and serious consideration of the people that the land continues to supply its demands. Within the past few years, the public is becoming alarmed at the disastrous results to agriculture by (1) erosion and (2) drought.

Erosion is the movement of the soil either by water or wind. Wisconsin and Minnesota are concerned with the movement of soil by water. All land in the above states before cultivation was either timber or prairie. The producing value is in the rich top soil. When this soil is washed away, nothing but the sub-soil remains and this sub-soil has little or no producing value. The removal of the top soil in small or large amounts is defined as sheet erosion. As this erosion continues, little ditches result, and as cultivation continues year by year with no protective measures against erosion these ditches grow into large gullies. Picture in your mind sheet erosion destroying 50% of the productive value of certain areas; then, in combination, picture several gullies advancing into a farm, dividing it by gullies 10,20, or 30 feet deep, making it very impracticable to farm. You can see it is little wonder the farmers and the public are alarmed at the possible dangers of this advancing enemy of agriculture. Many farms where erosion has advanced to a serious stage have been reduced in value to make the land worthless. It is the purpose of the Emergency Conservation Program, directed by the U. S. Forest Service, to recommend and put into practice policies for (1) reducing sheet erosion and (2) stop gully erosion.

The ideal way to control sheet erosion is by reforestation, which reduces run-off and sheet erosion. In general this may not be a good practice where the land is devoted to crop rotations in farming communities. The average dairy farmer rarely has more than 10% of his land in timber. Some method of control is necessary to hold the major portion of the top soil in place and at the same time to carry on with intensive cultivation. By laying out the field in narrow strips with their lengths at right angles to the slope, the water running off the field is retarded and more of the top soil remains in its original location. This is called the strip and contour method, and is usually applied to slopes from 12% to 25%. With intensive cultivation, rotation of crops is necessary, as this greatly assists in reducing sheet erosion. Terracing is the other method used to reduce sheet erosion and is applied to slopes from 3% to 12%. Terraces are a series of earth dikes laid out systematically at intervals on the field slope and designed to carry a maximum rainfall at any time, allowing the water to flow through the terrace channels at such a reduced velocity that sheet erosion is practically eliminated.

Gully erosion is controlled by reforestation, revegetation and dams, Generally speaking, for Wisconsin and Minnesota dams are the

major program of gully control. Where large quantities of water flow such as originate from large drainage areas, some mechanical means is necessary to transport the water over this vertical drop and at the same eliminating gully advance. The mechanical means is the construction of a dam high enough to stop the gully and made of such materials as will carry safely the flow designed.

Such is the picture of erosion in Wisconsin and Minnesota. The land is located in dairy communities, and it is to the public interest that methods be used to check and eliminate erosion problems. It is an educational program. The owner is requested to sign for certain cooperation before work can start. He is asked to change certain farming methods, construct terraces, move fill in place for earth dams, change fence lines, etc., in order that the directors may be assured that not only is the erosion problem in question eliminated, but that the farmer is applying methods to prevent future erosion, thereby protecting his entire farm and the public in general.

North Dakota has no difficulty from the erosion of soil by water. Theirs is a lack of water. North Dakota is a prairie state and it is not gifted with forested areas. The annual rainfall has been exceptionally low for several years. Each spring most of the streams and rivers are over-loaded with the flow from melted snows. During the summer there is usually a shortage of water. Water tables have been receding, lake levels have lowered alarmingly, and streams that used to flow the entire year have ceased to flow during the summer. Crop failures have been numerous and the people in North Dakota are concerned in all means for conserving water.

The E.C.W. Program has been that of constructing dams to store some of the spring run-off. The uses of this water are many. The lakes created furnish (1) watering places for livestock, (2) recreational facilities, (3) town fire protection, (4) summer ice supply, (5) breeding grounds for water fowl, and (6) a supply to help raise the ground the ground water level. It is little wonder that the people of North Dakota are enthusiastic over the water conservation program.

The construction of level terraces to save spring run-off and hold the water on the field is new in North Dakota. But with crop failures in the past, and this due to a scarcity of rainfall, the program of level terraces will do much to help the land in this arid climate.

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Detroit Free Press: "Where, asks an editor, "is America's best farm land?" Speaking off-hand, we'd say it is washing down the Mississippi."

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"I will hope until hope creates,
From its own wreck,
The thing it contemplates".

---Shelley.

MINNESOTA SOIL EROSION CONTROL ACTIVITIES

By Walter S. Olson,
Director

A year ago last April when soil erosion control in this State was made possible as a part of the work authorization of the C.C.C. activities, little was known concerning soil erosion in this State with the exception of that knowledge held by a very few men working in Federal or State agencies. There have been no funds available to prosecute this work within the State as State projects and with the exception of one or two small demonstrations of terracing and a very few scattered attempts at gully control nothing has been done to bring to the attention of the people in this district the seriousness and consequences of soil erosion. It can, therefore, readily be seen that we were not fortunate enough to have had a precedent set for us as were several of the other states which were given the privilege of doing this work as State Agricultural Extension Work prior to E.C.W. As a result the evolution of Soil Erosion Control Work in this State has been even more rapid than what perhaps can be said of many of the other states.

When this work was first instituted, a year and a half ago, we were confronted by not only an apathetical but, in some cases, a somewhat cynical mood among the farmers and business men of the district. I am glad to state that at present this attitude has been almost entirely overcome, and the interests and realization of the seriousness of the problem has been thoroughly implanted in the minds of both the farmers and the business men.

In the Soil Erosion Control Work in Minnesota we have attempted to sell the communities a very conservative and practical viewpoint. We have not attempted to sell this work as one which would remove Soil Erosion in its entirety. We realized that the erosion in the areas selected has shown a material increase in the past few years over that which occurred in the past, as shown by the geological evidence on the ground. Erosion as one of nature's agencies here, as elsewhere, has continued on down through the ages forming the many deep gullies and valleys which were present in this district prior to the time of man. When man first settled in this community he was forced to clear off enough of the timber land to enable him to raise the food-stuffs necessary for him to enlarge his fields and in so doing he continued to remove the timber, and finding fewer fields of the lower gradients he was forced to extend his operations to those patches of ground whose gradients reach as high as 30%. It also became necessary for him to pasture a goodly portion of the steeper timbered slopes, all of which has tended to intensify and increase the soil erosion.

It has been our objective, as outlined to the various communities in which we have worked, to restore conditions in this territory to as near those conditions which prevailed prior to man's activities as possible. In other words, if we can so control the soil erosion at present as to compensate for the conditions which, due to man's activities, have accentuated this action so as to approach as nearly as possible

that natural erosion which took place before man's activities, we will have considered our work a success.

The Soil Erosion problem in Minnesota is very similar to that found in Wisconsin with the exception that they have a considerable amount of so-called "bench erosion" which is not an important factor in Minnesota.

In our first year's work our activities were confined to attacking the problem at as near its source as possible under our authorization, and the methods used involved the construction of a number of small rubble masonry dams at the heads of the gulches for the purpose of preventing further inroads into the fields above by stopping the cutting action of the gulch itself. Some vegetative control measures were tried and with fair success.

With the broadened scope of the authorization a far more effective program was made available for operations during the past period. It has been our aim in the organization of our personnel to have qualified agricultural engineers and foresters, as well as civil engineers, in order that full advantage might be taken of the many methods of control as offered by these three branches.

Throughout the season those methods involving vegetative control and change in farm management have been especially stressed. Upwards of eight hundred acres of terracing on scattered demonstration plots has been completed, which, in connection with a tree planting program of over a million trees, including black locusts, walnut, willow and several of the conifers, has materially reduced the number of engineering structures, and has resulted in a much better balanced and effective control.

In outlining the work of the winter surveys much thought has been given to a further correlation of the work of the various governmental cooperating agencies. An outline has also been given the crews for a series of meetings to be held throughout the area with the farmers and business men with a view toward stimulating still further their interest, in a material sense, in furthering this work. Emphasis has been placed upon the fact that the governmental agencies can hardly be expected to proceed with this work on the present scale for an indefinite period of time or even long enough to cover thoroughly any considerable portion of the territory subject to severe soil erosion.

It is the intent to impress them with the absolute necessity of their cooperation and that in the end it will be necessary for them to take over the work and prosecute it through the means of local units or organizations. It is hoped that during the coming period we will be able to organize such local units which will contribute in an increasing degree time, material, and equipment. Through such means we think that the work of soil erosion control can be prosecuted on not only a more efficient basis but in a far more economical way, and that by the interest that the individuals, farmers and merchants obtain, a greater degree of assurance can be had that the work of soil erosion control in this area will be carried on and perpetuated in a manner that will assure the objective that we have started out to reach.

Our work this past summer, especially on farm management and the proper handling of terraces, has very forcibly brought out the necessity of follow-up work after the construction period. This work we find is almost imperative as the farmer does not seem to realize the extreme importance of the proper cultivation and use of his fields, especially when they have been terraced. This follow-up or extension work should be of such a character as to teach the proper methods of plowing, cultivation, and harvesting on areas that have been subjected to soil erosion control. The proper use of farm implements in connection with the terraces is one feature that must be emphasized as the farmer can, with a little undue carelessness, in a very short time completely nullify the work which has been accomplished by the C.C.C. camps.

Checking of farm practices should also be carried on for the full period of five years, as outlined in the Agreement, in order that the Agreement be carried out and an estimate of the results obtained might be had.

* * * * * * * *

(While an up-to-date article was requested from Mr. McKinnon, and appears in this number, the following account, written for the September issue, is so rich in human and historical background that it also is being included. --- Editor)

NEW ENGLAND, NORTH DAKOTA'S KEY CCC CAMP

(By S. D. McKinnon, Jr., Camp Superintendent)

Superintending a Forestry camp in a forestless state should be something to write about, especially if it is the best Forestry camp in the forestless state of North Dakota.

I am the devil who finds work for idle hands and I am charged with the responsibility of seeing to it there are no idle hands among the 250 men who compose Company 795 of the CCC located at New England, N. D., of which Captain Allen K. Davis is commander.

You have heard of not being able to see the forest because of the trees, but the trees in North Dakota are not the reason why no forests are viewed. There are no forests to view and trees are few and far between.

Treeless prairies during recent years of drouth have become objects of interest when displayed in leading magazines of America. Newspapers declare eastern coast citizens during recent months have been inhaling Dakota dust, and Dakota sand dune made the moving pictures recently. News reels show results of drought, while scientists tell of the steadily falling water level during the dry cycle. There is plenty of room for forests in North Dakota, as President Roosevelt noted when he suggested the starting of a forest 100 miles wide leading from the northern boundary of this state, south to Texas.

All this drouth has brought a sort of a complex to citizens of North Dakota. They wish to see water about. They wish to see ducks

waddling, children wading, boats out-boarding,and fish swimming. They want the freshets of spring held over for the drying days of summer, irrigating gardens and fields.

There is a demand in Dakota for dams and the Forestry department is supplying the demand. A half dozen state-wide organizations have backed programs of dam building to keep water from running away, to fill up old lake bottoms, lagoons and many times these organizations have had the ear of Washington while proposing the diversion of the Missouri river, from the "Big Bend" in the western part of the state, by canal and tunnel eastward across the state to raise the water level of rivers, to irrigate large areas and to refill Devils Lake, covering many miles of shoreline formerly under water when steamers plied the lake which at present is just a great pond of semi-stagnant water.

Washington has listened to the prayer of Dakota citizens for dams, and the CCC camps in the Forest Service are the answer to the prayer.

We build dams. Our engineers examine applications from individual farmers, and from communities and cities, and if plans show them to be practicable, work on the projects goes forward. We are ever ready to cooperate with communities and federal agencies in carrying forward relief work of performance.

As an example the little prairie town of Regent in Hettinger county will in the future have something of the aspect of a summer resort close by a fine large lake through an example of cooperation which should be pleasing to the President who has set up the different agencies to relieve nation-wide unemployment.

A bridge, costing some $8,000 is being constructed at Regent, under Hettinger county's Public Works program. Just across the bridge the FERA supplied thousands of dollars worth of work on a project of digging a canal, leading water from a creek into the former lake bed where the New England Camp CCC is building a dam 20 feet long to make a lake covering 80 acres and with an average depth of 9 feet. County charges on relief worked on this project. Farmers worked out seed and feed obligations to the government and CCC boys earned the salaries, the main part of which goes to about 250 homes in different parts of this state. The project is a permanent improvement which will change the history of Regent and make a real beauty spot in central Hettinger county, an oasis about which some day a forest of trees may beckon an invitation of shade and water, where now drouth bitten prairies present a different, and depressing picture.

It takes real cooperation, "the ever-lasting team-work of every blooming man" between many agencies to build a morale and to operate a camp so successfully it will place first among the camps of the North Dakota district, as the New England camp did recently.

I feel grateful to Captain Davis and his able assistant, Lieutenant Donald R. Johnston, for the cooperation given in making the New England camp place first in the state. However, my young and able foremen and the boys in the camp are the ones who do the actual work under

the direction of the engineers, and it is upon their work we all are judged. I am sure the work they have done will stand and will secure for the camp a high rating in the contest between all the camps of the seventh corps area.

Colonel F. E. Willeford flew here recently from Omaha to inspect this key camp. L. C. Tschudy, Supervising Engineer, was here from the Milwaukee office. Each inspector tells of his pleasure to note the spirit of cooperation which pervades the camp and community.

Citizens of New England are outspoken in their praise of the high standards held by the camp personnel, the self discipline of the boys, and all in the camp are appreciative of the consideration and cooperation received from the city. A fine large mess hall, a camp site, with hot and cold water, bath house, infirmary, recreation hall, swimming pool facilities, base ball field, have been donated by citizens to the camp and cordial relations exist between the tent town and the business and home sections of New England. The city furnished free electricity and water to the camp.

My work at New England has convinced me the administration's plan for the employment of young Americans in the CCC camps, out in the wide-open spaces, is not only building character in our youths, but building permanently for the future with public works which will assist in making living more pleasant.

We have built dams of which we are proud. The CCC system is building men of whom the country will one day be proud. We invite the world to come and inspect our finished dams and our boys who are attending this finishing school of manhood.

If President Roosevelt did nothing else, the rehabilitation, physically and mentally, of American's youth upon whose shoulders the burden soon will fall, is sufficient to set him off forever with those other farseeing chiefs --- Washington, Monroe, Lincoln, Benjamin Harrison, Theodore Roosevelt and Wilson.

* * * * * * * *

POLITICS!

Out on a rock heap close by a dam site near New England, N. D., a group of CCC boys were busily working with sledge hammers.

Upon a regular tour of inspection came A. D. McKinnon, Jr. superintendent of the New England camp.

"What are you boys doing for your country this morning?" the chief sang out in greeting.

"We are in training to run for governor of North Dakota", a big CCC boy said as he swung a sledge and crushed a big petrified boulder.

W E L C O M E - E R O S I O N E X P E R T S

WATER CONSERVATIONISTS OF NORTH DAKOTA

J. Connolly.

Credits A. D. McKinnon, Jr., Camp Superintendent - Rates on Leadership and Initiative - Constructs the Largest C.C.C. Dam in State - Take their place in Community Life - Save a Local Girl From Drowing - Camp Doctor answers Emergency Call - Business Houses Realize Volume of C.C.C. Business. - Thirteen Dams Constructed Add to Scenic Value and Provide Pleasure Meccas.

New England, N.D., Oct. 25 -- With the completion of a dam at Regent, one at Reeder and another at Hebron on Saturday of last week, the water conservation camp here, which includes Company 795, Civilian Conservation Corps, and the U. S. Forest Service Camp PE-59, ended its work program in this state for 1934.

It has been a successful season for the camp at New England, and a season that reflects credit upon A. D. McKinnon, Jr., Camp Superintendent, Captain Allen K. Davis, Camp Commander, other officials connected with the United States Army and the U. S. Forest Service, and upon the men themselves.

After a comprehensive tour of all the C. C. C. camps in the State, Colonel F. E. Willeford, Omaha, Neb., inspector for all C. C. C. camps in the United States Army Seventh Corps area, pronounced the camp at New England the best in the state. In the competition to determine the best camp in the area, which comprises Minnesota, South Dakota, Iowa, Arkansas, Missouri, Kansas and North Dakota, the local camp took a back seat to the Roaring River camp in Missouri.

The camp was rated on leadership and iniative of the men, the administration of the camp officers and of the Forest Service officials, the neatness of the camp, and the cooperation of the Army officials with the Forest Service.

Then, the camp here constructed the largest C. C. C. dam in the state. The dam at Regent will impound 1,167 acre feet of water, a storage capacity which exceeds that of the second largest, a dam at Stanley, N. D., by 200 acre feet.

The dam proper is 400 feet long, 22 feet high, is 120 feet wide at the base, and has 7,397 cubic yards of earth fill. The project was made possible through the cooperation of Hettinger county, and county FERA officials. FERA labor constructed two ditches, one an inlet ditch from the dam to an old lake bottom, and a second an outlet ditch from the lake to the original creek bed. The county paid for the construction

of a bridge over the inlet ditch and stood the costs of changing the course of a road flanking the lake bed.

The dam at Regent was one of 13 constructed by the camp during the last summer. Two dams were constructed at Hettinger, two at Hebron, one at Mott, and eight in the vicinity of New England. Repair work on five dams built by C.C.C. labor last year near Dickinson was done by the camp here.

At the present time, preparations are being made for moving the camp on Oct. 31, to Little Rock, Ark., where the C. C. C. enrollees will spend the winter. The men will be employed on construction work in Boyle Park, three miles from Little Rock, where they will build roads and bridges, construct various camp ground buildings, and do some landscape work.

From California to North Dakota.

Since enrolling with Company 795, the C.C.C. workers, who incidentally are all North Dakota boys, have done considerable travelling. During the summer and winter of 1933 and for several months in 1934, the camp was stationed at different points in California.

Members of the camp have fitted in nicely with the community life here. During the summer, the C.C.C. baseball team played several exciting games with the New England Firemen, one of the fastest teams in the southwestern part of the state, and often members of the C.C.C. squad played with New England teams. Lieutenant Donald R. Johnston, who is in charge of all athletics at the camp, coached the camp nine.

Members of the camp have been active in every community affair, such as dances, celebrations, Memorial Day excercises that have taken place during the summer.

Fight Fires and Waters.

The enrollees have been right on hand in any emergency. The C.C.C. boys composed several fire fighting lines here, and one of the men saved a local girl from drowning.

It has meant much to the people of this community to have Dr. Robert Murray, camp doctor, here in town. He has had to answer several emergency calls in the absence of Dr. W. H. Gilsdorf, local physician.

Members of the camp have taken an active part in the social life of the town, and have been the guests of and hosts to many people of the community at numerous dances and dinners. Last Saturday the CCC's were guests of the Rainbow girls at a dancing party. On Friday of this week many local people will be the guests of the CCC's at a farewell dance.

City Cooperates

The city of New England has cooperated nicely with the camp this summer. They furnished a bath house, light, water, a mess hall, and other conveniences for the camp. But the community has been well repaid,

as each business house in town has realized a volume of business that otherwise would have been impossible if the camp had not been stationed here.

Before the tools had been received at the camp, and before the dam building program started, a crew of men was sent out by Camp Superintendent McKinnon, to build up the local golf course.

However, the real, permanent improvements effected by the local camp will not be fully realized for a number of years. The 13 dams constructed in this territory by the camp will mean dollars and cents to natives of southwestern North Dakota in years to come.

Besides the material value, the dams will also add much to the scenic beauty of this portion of the state, and will provide real pleasure meccas for young and old.

The camp at New England has had an average strength of 230 enrolled men. With the U. S. Forest Service, the following assisted in the building of dams; Walter Makens, senior engineer; M. L. McBride, Jr. and John A. Gabe, technical foremen; and John J. Smith, Charles Merchant, Leo E. Gardner and James B. Connolly, foremen.

Many of the enrollees have taken advantage this summer of an educational program, which comprised subjects ranging from grade school to college work. The educational work was under the direction of R. R. Richmond, camp educational adviser. Forest Service officials and army officials cooperated with the educational adviser in teaching the instruction courses.

* * * * * *

Robert Wherland, Technician, Company 797, C.C.C.,

Watford City, North Dakota.

Friday morning, October 12th, Company 797 C.C.C. Camp, Watford City, North Dakota --- The Top Kick's whistle didn't have much steam behind it summoning the boys out of bed this morning, and the dinning hall wasn't very full at breakfast time. You see, last night the company had a farewell party, a farewell to North Dakota, and Watford City, and for some of the boys a farewell to the girls of Watford City, and the neighboring towns. A dance for those that knew how to dance, and a stag party for those who didn't, and after these affairs many private parties until the wee small hours of the morning -- ample reason why the boys weren't inclined to roll out of bed at 6:30 this morning, and why the Top Kick couldn't put forth the effort to sound off his whistle with its usual compelling blast. But the boys are entitled now to some relaxation from the usual rigid routine of their life in the C.C.C., for they've worked hard, and built a good many fine dams in McKenzie and Dunn counties this summer. A little more work now and the last dam will be completed, and then Monday morning the boys will be on their way to Minnesota. If they take as well to the work in the Minnesota Forest to which they are going as they have to the work of building dams in North Dakota, the Forest Supervisors in charge of the work there may well be proud of what they will accomplish during the winter, as we are proud of what they have accomplished this summer.

EMERGENCY CONSERVATION WORK IN NORTH DAKOTA

By A. D. McKinnon
Supervising Technician

For many years the State of North Dakota was the greatest wheat producing state in the Union. A little North Dakota town was the world's greatest primary wheat marketing point and another small town was the world's primary flax marketing center. North Dakota was referred to as "The breadbasket of the World".

In their eagerness to place more land under cultivation our landowners voted the expenditure of public funds for the purpose of draining sloughs and small lakes. Every one was happy and prosperous and little thought was given to the future. Our people never dreamed that some day nature would call for a settlement.

Gradually a change set in which for a few years was hardly perceptible, but eventually there came four years of extreme drought, pastures were seared, vast fields of grain scorched by hot winds, surface wells failed to supply sufficient water and the annual precipitation was reduced to one-half of normal. North Dakota citizens realized that nature was exacting her penalty and that steps must be taken to conserve our water resources.

When the present Federal Administration announced a national program of conservation of natural resources the people of North Dakota were immediately interested. However they learned that the Emergency Conservation program was originally intended to limit the work to National Forests and National Parks; but no National Forests or Parks had been established within the boundaries of North Dakota. Our citizens then appealed to Washington and pointed out to the Administration the necessity for conserving the water resources of our state and especially the need of holding back the annual spring run-off in order to restore the ground water table to its normal elevation. Our appeal was granted and Emergency Conservation Work to be carried on by the members of the Civilian Conservation Corps in North Dakota was authorized in May, 1933.

Seven main camps were established and approximately 1500 young men from North Dakota farms and cities were soon busy constructing small dams in twenty-two of our fifty-three counties. Actual work was started June 15 and continued until October 27 when all camps were closed and the C.C.C.'s transferred to other states. During this time a total of 136 E.C.W. projects were completed, which included 133 dams and 3 diversion canals. Mr. F. E. Cobb, State Forester, and Superintendent of the State School of Forestry at Bottineau, North Dakota, was Director of Conservation Work.

During 1933 we did not have authority to purchase materials such as sheet piling and cement and only native materials, such as earth and rock, were used in all our structures with the exception of one timber crib dam and one re-enforced concrete spillway dam. The timber and cement for the two dams being furnished by local communities.

The water conservation program was immediately popular in this state and in a short time over 2700 applications for dams of various sizes were on file in the Central State office, and applications are being received daily.

1934 PROGRAM

When the 1934 program was authorized we were permitted to change the design of structures to be built as purchase of sheet piling, treated lumber, and cement were permitted. Six C.C.C. camps under the U. S. Forest Service were established in May, 1934, and this number was increased in the latter part of July, when eight additional drought relief camps were authorized and established.

The different types of structures and the number of each that have been constructed during 1934 follows: 14 rubble masonry overflow, 5 earth fill with rubble masonry spillway, 62 earth fill with mechanical spillway, 21 earth fill with natural spillway, and 3 treated timber crib, making a total of 105 dams constructed in 1934. In addition to this, permanent masonry spillways were built in 60 of the 1933 projects.

The number of acre-feet of water that will be stored in the 241 conservation projects constructed in the two years totals 115,607.

The amount of work completed during 1934 by the 14 C.C.C. companies is reflected in the volume of material placed in the structures. A total of 279,439 cubic yards of earth fill, 13,443 cubic yards of rubble masonry, 5,620 cubic yards of rock toe, 68,268 square yards of rock riprap, 532,000 feet of treated timber and sheet piling, 2,114 lineal feet of tile pipe, $28,752.00 worth of cement went into the various projects.

That the citizens of North Dakota are interested in this water conservation program and fully realize what the results to our State will be is shown by the excellent cooperation extended to the U. S. Army and U. S. Forestry, Supervising personnel, Public buildings, including complete sets of fair ground buildings, community buildings, and school houses have been turned over without charge to be used for kitchen and mess hall purposes. Light and water have been furnished without charge and one town of only 500 population in two days raised $2,400. to build a kitchen and mess hall and to pay for drilling two wells to supply the main camp with water.

In October of this year Mr. F. E. Cobb was appointed Director of Shelter Belt activities in North Dakota and was replaced by Mr. B. J. Dieringer of the Milwaukee Office. Mr. Dieringer maintains his headquarters at Bottineau at the State School of Forestry.

During the two years a total of 3,200,000 man-hours of work were put in by the members of the C.C.C. in the U. S. Forest Service in North Dakota, and we are pleased to say that not one fatal accident happened to any of the C. C. C. enrollees while they were engaged in this work.

At the present time we have six survey crews in the field engaged in making surveys for projects we hope to have constructed in 1935. North Dakota citizens are hoping that an increased number of C.C.C. camps under the Forest Service will be authorized for our state in 1935. They are looking forward to the day when our annual precipitation will return to normal, when ponds of water will help to cool the hot summer winds, and the shelter belt is a reality, when we will have fewer Governors and again deserve the title of "the Breadbasket of the World".

* * * *

To: Mr. F. E. Cobb, State Forester

From: Camp #2773 - Carrington, North Dakota D.P.E. -- 67

Subject: Human Interest Story for the Bulletin.

By Stanley Raymond,
Engineer

— — —

Social activities in Camp #2773 at Carrington, North Dakota, have started to assume wide and varied proportions, largely due to the fact that the Sanitation Detail have found it well nigh impossible to dispose of empty metal containers. The Camp Personnel, both trainee and supervisory, have suffered unrelatable difficulties on account all of the cans could not be used up in playing the age old game of shinny, but were lying under foot throughout the camp area.

Our enterprising Camp Superintendent (who got that way in Lost Corner, Arkansas last winter) expressed a desire to the local "City Fathers" for their cooperation in helping him obtain a quick and easy method of can disposal. This desire of Mr. Jacobson's was taken under deep consideration by the City Council and forthwith came an invitation from them to Camp Superintendent Jacobson to attend a dinner which was to be held in his honor.

After an entire afternoon spent in cleaning and pressing "Jake" arrived at the designated spot the acme of Forest Service manliness. Of course the sumptuous repast was given due consideration and then the speeches were in order. Being the Guest of Honor our Superintendent was called upon to elaborate on the activities of the C.C.C.

At the close of Mr. Jacobson's speech (3 hours and 20 minutes) the Mayor of the town arose and explained at great length for the benefit of the members present the sanitary conditions which prevailed at the C.C.C. camp. At the close of his speech a committee of three presented the Forest Service with a female goat.

Alack and alas this was bad enough, but it so came to pass that Captain Johnson, the C. O. of Company #2773, was also present and he too was presented with a goat, his however being the Billy member of the pair.

* * *

Oh! Oh!

"Daddy, what are diplomatic relations?"
"There are few, if any, such people, my boy."

BEAVER FOREMAN MEETS DEATH WHILE AT WORK ON WATER CONSERVATION PROJECT

By A. F. Young

- - - -

ECW engineers of Company 797 C.C.C., stationed in the Watford City Tourist Park, Watford City, North Dakota, had found what appeared to be a good location for a rubble masonry overflow dam on Cherry Creek near where the creek winds out of the Watford City Tourist Park. Test holes, however, revealed that there was no foundation for a dam at this spot, there being nothing but quicksand under a thin strata of clay, so that the idea of building a dam there was abandoned by the engineers.

Not long thereafter, however, it developed that some beavers had picked the same spot as a likely location for a dam, and that they weren't letting lack of a foundation prevent them from going ahead and putting a dam there. The public first learned of this one morning when several of the largest trees from those in a grove surrounding the tourist park were found to have been cut down and placed across the creek bed in almost the exact spot the ECW engineers had picked and then abandoned as a site for a dam.

Members of the Watford City Park Board had wanted a dam exceedingly, but they wanted more to preserve the grove of trees which the beavers were using as material for their dam, because trees aren't so very plentiful in Western North Dakota, and this grove had taken ten years of careful nursing to bring to its present good start, so that when night after night one or two more of the largest trees were cut down and dragged into the creek by the nocturnal workers it was decided to take drastic steps to save the grove.

One night the C.C.C. company doctor and one of the ECW engineers, armed with a shotgun, kept watch on the site. After an hour or so of patient waiting their vigil was rewarded by sight of a dark object swimming in the creek. Bang! went the shotgun, and the object was still. Next morning a huge beaver, weighing all of 75 lbs., was found dead in the creek near the spot. No trees have been cut down since. Either the beaver killed had been working alone, or those working with him valued their lives more than they wanted a dam, and so, taking warning from his untimely end, decided to give up building a dam.

* * * * * *

The camp dispensary of Company 795, CCC, is the only one in the North Dakota district honored by being designated as a camp hospital, according to Dr. Robert Murray, camp surgeon.

The rating was obtained because of improvements installed under the direction of Dr. Murray. The improvements were made possible through the cooperation of Captain Allen K. Davis, camp commander.

* * * * * * *

A Business Man, asked to say grace, and being unaccustomed to the ceremony: "Dear Lord, We are in receipt of your kind favors of recent date and beg to thank you. We hope to merit your continued courtesy."

---Estelle H. Ries, Mother Wit

BEFORE AND AFTER

Neil MacDougall
Stanley, North Dakota

Try to visualize Western North Dakota as it was in the summer of 1933 and 1934. A panorama of dry, parched fields, sparsely sprinkled with brown, baked spots of grass interspersed with black, barren blotches of stark-naked soil, stretches out before us. Trees are scarce; water is at a minimum. One must travel miles to swim or sit in the shade beside a body of water. Truly, it is not a sight one can gaze on and derive any amount of pleasure. As a result of the drought, farmers are in despair due to the fact that their wells are running dry and their stock thirsts. Water is bought and sold. Such was Western North Dakota before the CCC came into existence.

In the summer of 1933 and 1934 a number of camps located in the western part of the state for the purpose of building dams to conserve water. Hundreds of applications were filed, by both farmers and city people, for dams to be situated in various spots. They saw their stock thirst, saw their game leave or die, saw the lack of recreational spots in this part of the state. After a number of the dams were built, and they saw what a vast benefit would be reaped therefrom, everybody was eager to have a dam on their property.

In the first paragraph I pictured Western North Dakota before the CCC came in. You saw the people looking for recreational spots, stock for a place to drink, and game for a place of refuge. Now picture what was formerly a barren spot, five or six years later. Where formerly were no trees now there is a cool, shady spot to rest. Shade trees and green grass abound. Now there is a small lake where one can spend an afternoon in picnicing or swimming. If it is urbanly situated, there are bath houses, diving boards - in short, a peaceful spot where one can spend a restful day. If it is rurally located, stock now come here to drink, game seeks refuge during the hot days, and the farmers themselves may forget their worries of water shortage, which is perhaps one of the most serious problems confronting the people of Western North Dakota today.

The above is not an idle day dream. It is already a proven fact. One can look at the dams built last year and see the great possibilities. I recall one dam built by this company last year at Williston, North Dakota. This summer they dedicated the lake and dam. Prominent speakers and a vast crowd attended the ceremony. Here is an example of the benefit of water conservation. Last summer this spot was merely a slope set in the hills with a tiny creek running through it fed by a spring. Now it is a good sized lake with modern, up-to-date bath houses beside it, and diving boards, and various devices for aquatic sports in the lake itself for the amusement of the swimmers.

It is true that these dams are still few and far between; however, if the same program is carried out for the next four or five years as has been carried on during the course of the past two years, Western North Dakota will be a healthier place to live in, its people

will enjoy a greater prosperity and it will have scenery that will vie with the glorious sunsets of the greater beauty of a GREATER NORTH DAKOTA.

AMOUNT OF WORK COMPLETED BY CAMP PE-64

Earthwork, 32,000 cubic yards; rubble masonry, 1450 cubic yards; 11 dams completed; riprap, 134,700 square feet; 97,000 board feet of sheet piling; 3600 sacks cement used; 1315 acre feet of water stored; 16,500 acres of land drained.

Five dams were worked out of the main camp at Stanley. Three dams were built in the vicinity of Parshall by the sub-camp established there. Late in the summer another sub-camp was placed at Bowbells. During the course of their stay, this camp built two dams. The dams were the various sizes, ranging from the Chocolate Drop Dam, which impounds a lake of 350 acres in area, to small dams of 10 or 12 acre feet. In all cases the spillways were protected by concrete or rubble masonry. This protection was obtained through three methods, cut-off walls, a masonry flume, or a masonry dam.

* * * * * * *

A HERO OF THE C.C.C. - JOE DUNNE OF FARGO, N. D.

Saving lives is an old story to Joe Dunne, Fargo, enrollee in the Civilian Conservation Corps.

Recently Dunne was transferred to the Watford City camp, but while at the New England camp his ability as a swimmer was recognized and appreciated.

At the New England dam where there is a bathing beach, a little girl got beyond her depth and started to go down. Dunne swam to her and towed her out.

Again while at the sub-camp at Mott, North Dakota, one of the enrollees while swimming breathed in too much water with his oxygen and started to go down. Dunne rescued him. Saving this fellow enrollee, who weighed about 170 pounds (Dunne weighs 135 pounds) proved quite a task for Dunne. When he finally did get him to shore he was in about as bad shape as the rescued.

But these are not the only ones Dunne has preserved from a watery grave. Joe can show clippings to the effect that he has saved nearly 20 others from drowning.

* * * * * * *

(We are glad to have the honor of recording this story of heroism sent for the long postponed Erosion Edition. Such courage and skill are timeless, and we hope to hear more of the good that others do. --- Editor.)

CAMP PE-60, VETERANS CO. C.C.C.
Valley City, No. Dak.
by
C. J. Carlson, Foreman.

This company of North Dakota veterans, after its winter sojourn among the forests of the Black Hills in South Dakota, arrived here April 30, 1934, to enter again upon its program of flood control work.

Last summer this company, 167 strong and composed entirely of North Dakota men, was camped at Fort Lincoln near Bismarck, this state, where it built several dams in the surrounding counties. After cold weather came upon them, the men were transferred to Lightning Creek, South Dakota, in the heart of the Harney National Forest, where for six months their time was occupied clearing the forest of all its underbrush.

After arrival in Valley City, the men spent their first two weeks getting their camp-site ready so that it would be more easily livable. The local park board arranged to let the company have a piece of land at the north end of the city which had been filled in during the winter by CWA workers. Of course, it required a lot of extra work to get the site in condition so that if it rained we would not be confronted with mud puddles.

The entire company, which by this time had been increased in number to 200 men, was put to work hauling gravel for the main area in front of the mess hall, the laundry and headquarters building, as well as to build gravel walks in front of the seven or eight rows of tents which housed the men.

....A huge memorial plaque was erected immediately in front of the flag pole in the center of the camp area facing the city. The plaque is dedicated to the men of the company and contains the words, "Co. 1783, Vets. C.C.C., Camp PE-60, North Dakota, 1934". The stones used to decorate the sides of the plaque are a white quartz which were brought from the Black Hills. The flag pole, some 60 feet in height, was also cut in the Black Hills forests and taken with the men to their new camp here in Valley City. Both will remain at the camp-site as a perpetual monument in memory of these men and the time they spent in this beautiful city on the banks of the Cheyenne River.

Mr. Carlson continues with a colorful history of the Veterans, which we are glad to have, but which space does not permit in its entirety. "The dust got into our mess hall, our food, in our tents and clothing, so that we breathed, ate and lived dust entirely during those first few days. Many of the men had come to wish they had never left the Black Hills as dust storms were unknown there. . . . It was not long before things began to shape up, and a regular routine of work was started with the men taking a greater interest in their work". Mr. Carlson continues with a description of the numerous projects,

the comings and goings of the Veterans:

"Camp PE-60 is to receive a new company of men, composed entirely of the youth of the State: Staff of forestry overhead: John F. Dillon, Bismarck, N.D.; Superintendent, Fred Oberg, Kildeer, N.D., Senior Engineer; Walter Augustadt, Goodrich, N.D., Engineer; C. J. Carlson, Valley City, N.D., Foreman; Raymond C. Leidtke, Fargo, N.D., Foreman; Christian Potthast, Harvey, N.D., Foreman". He gives a list of the Army personnel, and concludes:

"It must be noted here that the people of this section of the State realize the immense value of this work, as all seem anxious to get a dam constructed on their respective farms. This summer has been an extremely dry and hot season. There is little or no water in the neighborhood. Even the rivers, like the Sheyenne and the Maple, which in ordinary years are filled with water, are this year dry in places. The question of water in this state is a vital one, and unless enough dams and similar projects are constructed to hold back the supply, the State will very soon become another Great American Desert. It is hoped, however, that conservation will continue here for years, so that in time the State will again have its normal supply of water."

* * * * *

Doc: "When did you first suspect that your husband was not all right mentally?"
Mrs. Jones: "When he shook the hall tree and began feeling around on the floor for apples."

- Ollapod.

* * * * *

Diner: "Do you serve crabs here?"
Waiter: "We serve anyone; sit down."

-Stray Stories.

* * * * *

Extra Charge

"I suppose one dresses for dinner here?" the new guest asked the small town hotel keeper.

"Well, suit yourself, sir. But I might add that we charge extra for meals served in bed."

* * * *

WISCONSIN EROSION CAMPS

* * * * * *

E. R. Jones

Erosion Calls for Winter Work - Farmers Cooperate - Gullies Kept Off of Level Land - Cow Lanes and Hog Yards Moved from Steep Places - Terraces - Tree Planting Planned for Eight 1935 Camps.

Wisconsin had nine erosion camps in 1933 and eight in 1934. Mt. Horeb, Bloomington, Richland Center, and West Salem were the new locations in 1934. The camps at North Bend, Independence, Gilmanton, and Durand had the same locations as in 1933.

E. R. Jones is Administrator of Flood Control under the Department of Conservation. O. R. Zeasman, regularly Extension Specialist for the College of Agriculture in Erosion Control, is Field Director. Neal Minshall is Assistant Field Director, and is responsible for the design of all hydraulic structures. C. E. Hughes is Fiscal Secretary for the erosion camps, and with three clerks to help him in the office, has kept the records in good shape.

Plans are being made for eight soil erosion camps in 1935. The four camps which have new locations this year will continue in the same locations for next year and new locations have been found for the other four. This practice seems to be a good one, because it enables the starting of the bigger jobs the first year so that if necessary, two years can be taken for their completion. This enables the farmers to make earth fills for the large dams in better shape than if the filling had to be rushed in one season.

If the Fifth Period is authorized, we would like to keep the Wisconsin Erosion Camps all winter, because in their locations as now contemplated there will be plenty of winter work for CCC men. It will consist largely of streambank protection. It will consist of driving rows of piling, building log cribs to be filled with rock, or anchoring willow logs or trees on eroding banks so as to arrest the erosion, cause a deposition of sediment and get vegetative growth established on the eroding banks.

The technical staff at each camp consists of one camp superintendent, two senior engineers, three junior A engineers, two junior B engineers, one agriculturist, and one forester. For the Third Period, there were 220 farmer co-operators, all of the work being on private land. The aim is to stop the big gullies that have an overfall of from six to twenty-five feet at their head and that are eating their way back through a comparatively level stretch of land. For heads greater than ten feet a drop inlet soil saving dam is the cheapest structure to use, although it does impose a heavy job upon the farmer to make the necessary earth fill in some cases. One hundred seven such dams were built during 1934. The rest of the structures, about 300 in number, are for the lower

heads and consist of head spillways, head flumes, and notch spillways made either of reinforced concrete or of masonry, depending upon the availability of rock. Where a gully has advanced to the level part of a watershed and its branches have reached up the hillsides to the proximity of the watershed boundary, the area draining into each of the branches is so small that it can be taken care of by planting without any structures at all. Over 600,000 trees have been planted by the eight camps during the Third Period.

During the summer of 1933, four engineers worked in the Hydraulic Laboratory at the University of Wisconsin, testing out models of different designs for the drop inlet and other spillways to determine the hydraulic characteristics of each in an effort to arrive at the design that is most economical for the different conditions. That work was continued last winter with CWA help. The results are published in Research Bulletin #122 of the College of Agriculture, which is a joint bulletin with the College of Engineering. Upon request, the University has sent from ten to twenty-five copies of this bulletin to quite a number of the other states. The Handbook prepared hastily in 1933 was revised in the spring of 1934 and now Mr. Minshall has a supplement that will be added to it to guide the work for next year.

In September 1934, we imported four engineers from Indiana who had had experience in the construction of temporary wire dams. Our aim was to make the best possible use of those dams in Wisconsin if there was a place for them. Only in the very poorest soils, however, where some good earth has to be placed in the bottom of the gully in order to permit the growth, were such dams found to be of value.

Certain changed practices were required in 1933 on the part of the farmer. In 1934 we were able to stiffen these requirements, to include the fencing of woodlots, changing fences to permit cultivation on the contour, moving cow lanes and hog yards from steep places where they contributed to erosion, and strip farming. At each camp terraces were laid out on land adapted to such treatment and the farmer was given the aid of our technical staff in the construction of the terraces. During 1935 we expect to extend still more aid to farmers in laying out their fields on the contour and also in the construction of terrace outlets. For example, strips twenty feet wide will be laid out and a low dike constructed on each side of them. Grass seed will be planted on these dikes and on the flat bottom between them, and all water will be excluded for probably two years, or until a tough sod has formed; then the farmer will build terraces to discharge into these terrace outlets. In the meantime, gullies that have formed on the slopes to be protected will be held as well as possible by sod dams at intervals in them. It seems better to construct the terrace outlets first and the terraces afterward rather than vice versa, because new gullies frequently form at improperly prepared terrace outlets.

Winter surveys are now in progress for 1935. At each of the eight proposed camp sites, a crew of two engineers and one agriculturist are at work. By starting now to get the farmers to plan for next year, we can get better co-operation from them than we could if the surveyors were delayed until next spring or summer. Two foresters under the direction of F. B. Trenk, Extension Forester of the College of Agriculture, are planning the tree planting for the eight camps for next year.

EROSIONISTS THE VANGUARDS OF REFORESTATION

While newspapers and magazines everywhere have heralded the more colorful emergency phases of tree-planting and fire-fighting, too little has been recognized of what has been done to remedy the great national emergency known as soil erosion. Much emphasis too has been placed upon the balancing of the financial budget, while the Shock Troops, the Erosionists, have been aiding nature to regain her balance by holding in place uncounted tons of precious soil richer than that of the famous Nile.

The stripping of the forests has played its part in upsetting nature, and trees are being planted in gullied fields. Many believe, too, that the filling up of the ponds and lagoons of the prairies has gone a long way toward loosing spring freshets, and that reimpounding these ponds will help restore the lost balance.

The contributions of our erosion experts show how the CCC are saving soils by planting trees, building new reservoirs, and replacing refreshing pools that were so welcome to the barefoot boy of the parched prairies.

All honor to these Emergency Conservation workers who have retained their vision under banners of dust in areas where drought has stalked, and have restored watering places to tempt back the wildfowl that vitalized the horizon of the pioneer. They are holding back a creeping desert and encouraging the rose to blossom.

The Editor.

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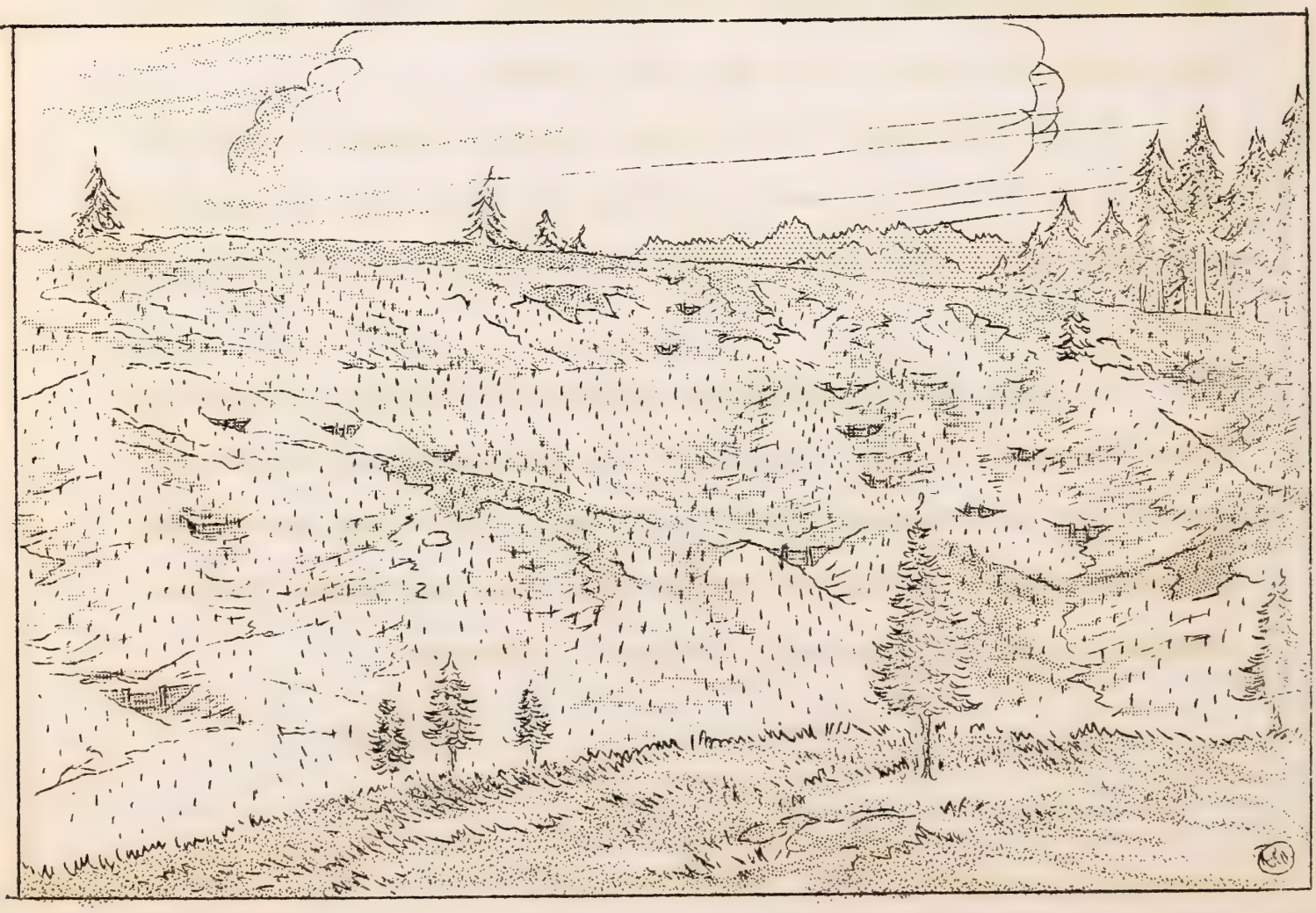
BEFORE –



AFTER –

From sketch by Moody – C.C.C Enrollee

E. C. W. WATCHWORDS

By: J. D. Parsons, Engineer.

"Save the Soil", Keep the Silt out of the Streams", and "Conserve Moisture", are watchwords of the Emergency Conservation Work program. In Texas and Oklahoma they are accomplishing this principally by terracing; in Minnesota and Wisconsin by building soil saving dams, and encouraging revised farm practices; in Tennessee principally by plantings; and in between by a combination of the various methods. In all the areas a more diversified treatment is being applied, as the fact becomes evident that no one method is a sure cure under all conditions. This diversity of treatment is encouraging because it indicates an appreciation of the size and breadth of the problem.

In addition to the very creditable accomplishment of work, there has been the accomplishment of another plan, near to the heart of the President, in the creation of the E.C.W. -- the building up of bodies, the improving of minds and spirits, and the creating of leadership in the unemployed young men of the country.

A great deal remains to be done. Cooperation and an appreciation of the other fellow's problems and difficulties will speed the program.

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EROSION CONTROL FROM THE AIR

W. I. White, Technician, E.C.W.

Cooperative arrangements have recently been made with the Commanding Officer of the Army Air Corps Headquarters, Scott Field, in southern Illinois, whereby erosion control technicians of the Forest Service will be permitted to travel with the training planes operating out of Scott Field, for the purpose of observing badly eroded areas and spotting locations for new E.C.W. camps. Previous experience with this method of reconnaissance in 1933 demonstrated it to be highly successful for locating quickly and accurately the seriously eroded localities where erosion control camps could do the most good.

After locating the areas from the air and learning their extent, some ground work is necessary to determine the nature and degree of erosion damage, determine suitable camp sites and promote the necessary cooperation from the local community.

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INFORMATION ISN'T NEWS - ACTION IS.

BLACK LOCUST IN EROSION CONTROL
BY
R. S. MADDOX

— — —

No other tree known is so effective for control erosion in this section as the black locust, (Robinia pseudoacacia). It sprouts from the roots, but that is one of its valuable characteristics and should not condemn its use as the best tree to take care of a serious erosion problem. Many clumps of it can be seen within and along cultivated fields where no apparent difficulty has been encountered by the owner in preventing it from trespassing upon the land adjacent to it. No one would recommend it for planting in a garden or cornfield; these are not desirable places for it. Other trees, including their root systems, grow so much more slowly than the locust during the first few years that the damage from erosion on land where they were used might during that time be much worse than any inconvenience suffered from sprouting if locusts had been used.

Furthermore, the locust produces in the shortest time one of the longest lived fence posts. It improves soil fertility and encourages the reproduction of other valuable species in its midst.

If the owner of eroded lands should wish, he could extend his plantings away from the gully banks by using whatever other tree species he desires. His locusts in the gully and his other desired trees out on the banks should constitute a valuable farm woods.

* * *

A TRIBUTE TO THE WATER CONSERVATION CAMPS, FROM THE FRAZEE (MINN) PRESS.

FRAZEE PASTORS PRAISE
CCC CAMP'S CONDUCT

— — — —

In expressing his opinion of the C.C.C. Camp (Number 2701) stationed here from August through October, Rev. Fr. Adam J. Junghans, pastor of the Sacred Heart Catholic Church of Frazee, says:

"About 125 of the boys here last summer attended services every Sunday. Send the same group back to us again---that is how much we liked them!"

Rev. A. C. Seltz, pastor of Bethlehem Lutheran Church, also has these complimentary words for the boys:

"I visited at the camp a number of times and met the utmost kindness and cooperation on the part of every one. The boys' conduct, in my estimation, was better than the average in such a large group."

* * * *

The Frazee Boosters Club sends special message to Director Olson, asking for a summer C.C.C. Camp --- expressing community friendliness.

(This is the second of a series of German forestry items and comments initiated by H. Basil Wales, Assistant Regional Forester. The concluding article will appear in the February issue.)

Storm damage is a factor to be reckoned with in timber propagation on the estate of Count Schaffgotsch. Storms sweep over the mountains with little warning, and unless the cutting face is carefully planned with reference to the direction of the wind, considerable damage to the shallow-rooted spruce is frequently suffered. One of the protective systems developed on the Schaffgotsch estate is the topping of mature trees on the edge of the cutting. This is done in three successive stages. The trees nearest the clean-cut area are topped fairly low. Next comes a series of trees with crowns lopped higher and finally a third stage where still less of the crown is removed. This gives a gradual slope from the edge of the open side, extending into the main timber body a distance of 60 to 90 feet. In topping the trees, a straight incision is first made with a hand-saw, and then a slanting cut made to intersect it. This method prevents splitting the bole of the tree, when the top drops over. The wound is then smeared with pitch or tar to prevent fungus infection. This system was devised by Forstmeister Emil Stock of the Schaffgotsch estate, who has patented the method in foreign countries, including the United States, under serial No. 1,605,343.

(Protection against wind damage is necessary here, particularly in the swamp forests. --- Editor)

The propagation method followed in the spruce forests of the Riesengebirge is that of field planting after clear cutting. Divided into five reviers or blocks, there were originally five separate nurseries maintained to supply seedlings for the area. Now one central nursery takes care of all requirements. One head nursery man and a small crew of girls do all the work of producing stock for replanting. The young trees are field planted in their fourth year.

(I wonder if Harry Turner ever thought of hiring girls to do the weeding at the Beal nursery. --- Editor)

As in many other parts of Germany, the timber is cut and peeled in the summer and left on the ground until snow comes in sufficient quantity to permit hauling on sledges. Peeling is required by law to prevent bark beetle infestation.

(This may be the answer to Ips control in connection with the summer stand improvement work. --- Editor)

Comments by H. B. W.

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(Due to inspiration reported by field officers from seeing that we are now beginning to do in this country what they have been doing in European countries for many years, it is hoped to make Foreign Forestry a regular feature of the Bulletin.)

An article on Swedish Forestry, by Calvin B. Stott, Associate Forest Code Examiner, is scheduled for March.

The Bulletin staff will appreciate future contributions dealing with forestry in other lands.

CHEQUAMEGON T.S.I. TRAINING CAMP - MONDEAUX

Woodsman, prune that tree,
Spare not a single bough.
In youth the weevil plugged her, see,
So I'll defunct her now.

To arms with saw and blade.
She has a shaggy crown;
Her every limb is forked and flayed-
Go chop her branches down.

What Ho: You woodsman, why
Doest cast asperous glance?
If pruned she would be like to die?
You wouldn't take a chance?

A menace to the stand
An incubator she;
Aye strip her spiny, limby stem-
The bud worm he shall see.

You say the weevil's went?
A new bud will be grown?
And you would prune, on pleasure bent,
But half the living crown?
Why rather than to stoop to that
I'd cut the damn thing down.
Refer to Hawley, man
Page 43, I'd say.
In black and white it stands;
Trees never grow that way.

The boys Che wamie gone
Cocked attentive ear,
While Wales and Watson (on and on)
And Fenger lingered near.

The lore of T.S.I.
Revamped, rebuilt, reborn -
The bull they had from dawn to nite
Right by his craggy horn.

Bold Grosbeck dealt the pat hand
The last commandments made
He read the rules for all the land
We'll see that they're obeyed.

* * * * * *

No one is wise enough to advise himself. German Proverb.

RELEASE OF YOUNG NORWAY PINE FROM ASPEN COMPETITION

From Forest Research Digest, Issued by the Lake State Forest Experiment Station, January, 1935.

The C.C.C. Camps have made a large number of release cuttings in Northern Minnesota. What is the value of such cuttings, and what effects may be expected as a result of them?

One answer to these questions is found in the results of release cuttings in the Birch Lake Norway pine plantation on the Superior National Forest. This plantation was established in 1915. A fire which burned off all vegetation had occurred the previous year. The plantation is a little over a hundred acres in extent. Various ages of stock were used but all were transplants, 2-1, 1-1, and 1-2. The trees were spaced 8 x 8 feet or 680 trees to the acre. After planting no care was given the area.

In 1931 the station made an examination of the area and found that although pine still predominated on one-fifth of the area, aspen and brush had completely claimed one-fourth of the plantation and over half was a mixture of aspen and pine.

In the same year a release cutting experiment was established in the area of mixed aspen and pine, where aspen suckers to the extent of 1400 per acre had grown up and due to their large size were affording considerable competition to the planted pines. At this time there were about 375 Norway pines per acre, which ranged in diameter from 1 to 5 inches and in height from 9 to 28 feet. On one quarter-acre 380 aspen per acre were cut and only the thriftier pines were released. On another quarter-acre every planted tree was released, necessitating the cutting of 800 aspen per acre. A third plot was left uncut for comparison.

In 1934, or three years later, the plots were remeasured to determine the effect of the removal of the aspen competition. The diameter growth in the heavily released plot was .31 inches per year, nearly two and a half times as great as on the check plot, .13 inches per year, and nearly one and a half times as great as on the lightly treated plot, .23 inches per year. The trees which were suppressed at the time of cutting on the heavy release plot responded so well that they grew in diameter almost as fast as the dominant trees. The height growth was similarly affected but to a lesser degree than the diameter growth.

The heavy release cutting is by far the most effective, both as regards the growth of each individual pine and freedom from future aspen competition. In the moderately released plot some pines are still suppressed and will probably die within a few years.

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The worth of good is not known but by experience. -- Turkish Proverb.

PLANTING FIGURES SPEAK FOR THEMSELVES

Hy Goldberg, Chippewa

In 1930 and 1931, over 1,300 acres were planted on the Moquah Unit of the Chequamegon Forest, and the survival averaged far over 75 per cent. Witness figures in the following table:

Plantation	Species	Age Class	Acre-age	Per Acre Cost of Establish.	Survival Per Cent	Date Planted
P-1	Jack Pine	2-0	3	5.45	85.0	Sp. 1930
P-1	Norway Pine	2-0	146	5.45	67.6	Sp. 1930
P-2	Norway Pine	2-0	80	4.75	59.0	Sp. 1930
P-3	Norway Pine	2-0	980	4.06	76.9	Fall 1930
P-4	Norway Pine	2-0	149	4.20	89.7	Sp. 1931
P-4a	Jack Pine	1-0	11	4.20	81.0	Sp. 1931
			1369 Acres			

Spring 1934 - - - - 656 Acres
Fall 1934 - - - - -3816 Acres

The striking factor about these figures is that these trees were planted previous to the E. C. W. era and:

1. Low cost per acre maintained.
2. Which means a high speed of planting with possibly 1500 more trees set per day per man.
3. And a HIGH SURVIVAL was attained in spite of this speed.

Evidently our planting methods are all right. It is the other factors of drouth, rabbit damage, grubs, etc., which have caused low survivals on plantations in other forest units. Then, there is no need to slow up on the speed of planting, but to concentrate on these three enemies: drouth, rabbits, and grubs.

Rabbits can be controlled by intensive and extensive rodent control before and after planting. The grub problem can be partly solved by planting non-grub areas first until the grub cycle is at a low ebb. And, watering some of our plantations during dry spells may come to pass yet --- who knows?

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What is needed at the present time is not more information, but more inspiration; not more profound scholars, but more great teachers, men who can touch the lives of their students with their loves, their admirations, their enthusiasms, and their little wisdom.

Hamilton Holt,
President of Rollins College.

THE CLEVELAND-CLIFFS IRON COMPANY PLANTATION

By H. Basil Wales, Assistant Regional Forester

The Supervisors on their recent field trip inspected the Baldwin Kiln plantation of the Cleveland-Cliffs Iron Company which is located approximately three and one-half miles northeast of Negaunee, Michigan. They will be interested in the following facts as to this plantation which have been very kindly furnished by Professor W. F. Ramsdell of the University of Michigan. Size of plantation area---approximately 35 acres. Plantation established in the spring of 1903. The following species were used: 5,000 Scotch pine three years old; 1,000 Scotch pine six years old; 1,000 Norway pine three years old; 12,000 white pine three years old; 20,000 Norway spruce three years old and a considerable number of Douglas fir for which the age class is not given. The following figures on survival were furnished by Mr. Brotherton, CCI logging superintendent: Spruce and Scotch pine 90%, Norway pine 80%, white pine 65%. A growth and yield plot established in August 1933 gave the following figures:

Area of plot 1.875 acres.

Norway Spruce	1203	trees	equivalent	of	1027	cu.ft.	Stem	Vol.	per	Acre.
White Pine	408	"	"	"	675	"	"	"	"	"	"
Scotch Pine	138	"	"	"	3337	"	"	"	"	"	"
Norway Pine	48	"	"	"	6136	"	"	"	"	"	"
Balsam	1	"									
Total	1798										

The white pine, after making splendid early development suffered severely from the white pine weevil and breakage. The Scotch pine showed a very satisfactory growth and yield in cubic feet but because of the twisted, crooked, limby form of the tree offers little in the way of saw-log development. The wood of this tree is not well suited to pulpwood, fuelwood or other than pole and saw-log use. The Norway spruce has made relatively slow average growth but on account of the large number of trees per acre, the uniformly good form and increasingly rapid growth of the dominant trees, gives promise of making at least an excellent pulpwood stand.

Since Norway pine was outstanding on this plantation, a special study was made of some 658 trees which occupied a total of 0.5447 acres. The spacing was approximately 6 x 6 feet. The total merchantable volume of pulpwood to a 4" top averaged 5,721 cu. ft. on an acre basis, approximately 57.21 cords. This indicates an average growth per acre per year from establishment of plantation of 1,733 cords. The maximum DBH was 10.9 inches, minimum DBH 2.6 inches, average DBH 7.0 inches. Average height 36 feet.

The 658 trees were classified as follows as to merchantability (Basis-pulp sticks 8 ft. long, 4 inch top diameter outside bark):

42 trees less than 4.4 inches DBH - No merchantable sticks
38 trees 4.4 to 5.0 inches incl. DBH - 1 merchantable stick

136 trees 5.1 to 6.2 inches incl. DBH - 2 merchantable sticks
442 trees 6.3 to 10.9 " " " - 3 " "

These figures probably cannot be taken as indicative of average plantation production on similar sites since the trees are in narrow strips with slower growing species adjacent. This gives the Norway pine more sunlight than would occur in a large plantation area. On the other hand, there are usually more failed spots in a plantation over large areas. These failed spots would of course reduce the number of trees but the trees surrounding the openings would normally be larger than those in the dense plantation.

A close study was made on 45 trees and gave the following information: 5 trees grew less than 1/10 inch, 21 trees grew 1/10 inch, 19 trees grew 2/10 inch. The 45 trees averaged .13 inches DBH growth. (All of these figures are for the past year). This is considerably less than the average annual DBH growth for the life of the plantation and only about half what it should be at this period under saw-log management. The normal or ideal stand should have about 900 trees of this age and size per acre instead of the 1,206 trees which are actually present.

It is planned to make a thinning in this stand next year, taking out from 30 to 50 per cent of the trees. This should give a decided acceleration to the diameter growth and the yield of 20 to 30 cords of pulpwood per acre should not only pay for the thinning but amortize the entire plantation investment.

It may be of interest to state that the Douglas fir which were planted were either overtopped early in life and killed out or badly stunted and deformed. Only 47 Douglas fir trees were found which were normal or reasonably so. Their height ranged from 14 to 35 feet, average 23 feet. Diameters ranged from 2.1 inches to 7.3 inches, average 4.1 inches.

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SO SAD

Their meeting---it was sudden,
Their meeting---it was sad,
She gave away her sweet young life---
'Twas the only life she had.

And there beneath the willows
She's sleeping peacefully now.
There is bound to be disaster
When a freight train hits a cow!

---Cheefee, Chippewa.

WATERSMEET DISTRICT GAME CENSUS

By W. V. Kennedy

The game census carried on in this district, out of the Watersmeet Camp, has given us many fine figures on the game situation, as it really was during the 1934 hunting season. Figures are always poor reading but the old saying is "Figures don't lie." So here we have some for your comparison:

Local hunters purchasing liscenses	110
Hunters passing through station with deer	309
Number of Spike Horns taken out	21
Number of Black Bear taken out	3
Dead Does seen in the woods	55
Dead Bucks seen in the woods	1
Total number of Deer seen by these hunters	2198
Total number of Bear seen	7
Heaviest Buck (Approximate)	225
Most number of points on any Buck	13
Average number of days hunted by these men	7.7
Hunters believing deer on the increase	15%
Hunters believing deer on the decrease	85%

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NOTE: This is excellent material. However, it still leaves some questions unanswered. What is the total area hunted over, and the number of acres of forest it takes to produce a deer in the "bag"? How many man-days did it take on the average to "bag" a deer, and what percentage of the herd was killed during the hunting season? What was the estimated total number of dead deer left in the woods?

The figures given above secured from hunters by foresters indicate the fine relationship which will spring up from cooperative effort.

Dr. R. E. Trippensee,
Wild Life Management.

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WATERSMEET CAMP F-44
WATERSMEET, MICHIGAN

This is the former camp F-1 of Glennie, Michigan. We moved up to Watersmeet Camp on November 1st, as soon as the planting season was over in the Huron Forest. As far as personnel is concerned, this camp is a combination of Glennie and Watersmeet Camp. The Commanding Officer and his second in command were transferred with the Glennie Camp CCC boys, while the Superintendent and the Foremen remain from the original Watersmeet Camp.

The transferred CCC boys find the work here at Watersmeet Camp a contrast to that at Glennie Camp. Camp F-1 was primarily a planting camp; three million trees were planted by Glennie Camp alone this fall.

In Camp F-44, construction of firebreaks, culture work in hardwood stands, hazard reduction, telephone lines, road surfacing, and forest inventory are preferred activities. Our Detroit boys are becoming acquainted with the business end of the snow shovel. Most of them did not believe there could be as much snow in all of Michigan as we have had to date in this sector: and the winter has not fairly got under way.

H. Stoehr,
Technical Foreman.

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"MORE ON THE UNIFORM SITUATION"

Phelps Camp F-26

Veterans, perhaps, are more cognizant of the uniform situation than the ordinary individual, and when you are in daily association with a company of 250 of them, comments are fast and free.

Up in the north at Phelps Camp, the Forest Service orderly is a shell-shocked veteran of the 128th Infantry, 32nd Division, with seven decorations for bravery under fire. Last week the camp was well blessed with inspectors and visiting Forest Officers, which included L. Stockdale of the Washington office, Ass't. Regional Forester Nord, Supervisor Wohlen, Rangers Iverson, LaRoque, and Sheffield, together with all specialists out of the Supervisor's office and all Superintendents on the Nicolet Forest. The "Colonel", honorary title so bestowed, was busy taking care of the large assembly and upon their departure was asked by the Camp Superintendent what he thought of them. The "Colonel" replied after much deliberation, "You know Chief, you had men from Washington, Milwaukee, Rhinelander, and all over the Forest, I guess, and the only way you could tell who was the ranking man was to try and find the man with the best cloth in his uniform, and then you were almost always wrong.

The "Colonel" is now busy designing a series of bars, stripes and pine trees in gold, silver, and bronze, which start with the Forester and continue down to a Truck Trail Locator. Some of those we have been privileged to see so far are; jagged lightning under a pine tree for inspectors (quite appropriate), and a curved road with a wheel below for truck trail locators. As soon as "Colonel" has completed the series we will forward them for action through the proper channels.

Robert K. Ashton,
Project Superintendent.

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"Are you satisfied with your job? Well, don't be! Lord Northcliffe once asked this question of an employee, and on receiving an affirmative reply promptly discharged the man, saying that he did not want anyone around him in such a frame of mind. Love your job, yes--be an ergophile---but never be satisfied until you have attained the top--and then keep on!"

INTRODUCING CAMP PERKINSTOWN

By
R. A. Postnikoff

- - - -

As new comers to the "Bulletin" Camp Perkinstown, Perkinstown, Wisconsin, wishes to introduce itself. How do you do?

November brings us to the beginning of the holiday season. Holidays mean tales, so let's spin one called Camp Perkinstown. Not at all different from any other camp was this one at the beginning. Today, though, one is conscious of a vital sign of dreams having become actualities.

It is a certainty that plans were made for improvements on the grounds, in the buildings, and for the general welfare of the men. From these we can draw the picture of the camp. We are located on a knoll nineteen miles northwest of Medford. At the foot of the hill is beautiful Lake Katherine and just a stone's throw up the road is Perkinstown.

Housing for the men consists of two-story barracks with the remainder of the buildings being constructed according to standard design. A new recreation hall, one hundred and twenty feet long, offers copious space for all indoor activities. The administration building, just completed, houses the Army and Forestry offices with ample room for quarters for the Officers and Camp Superintendents. The lounge soon will be more commodious upon construction of an open stone fireplace --- great stuff for these winter evenings.

During the past two months one change has followed another until at the date of this writing we are living amid pleasant surroundings. First, all the streets and drives were graded; then, gravel paths were laid. Following that sod was put in place to be seeded in the spring. Three operations to describe the transition but Oh! what a world of difference.

Next month watch this page for introductions to our Officers and facilitating personnel. Then we will be ready to publish our current news.

* * *

TREES

By Ned Meller
Missouri

- - - -

Trees are nice in summer
Pretty in the fall;
Beautiful when painted
And hung upon the wall;
Stately in the winter,
Standing bare and tall.
They are Nature's triumphs
Whether large or small.

I love the trees sincerely
Admire them one and all;
And though I'd like a million,
There's only one I'd call
My own. My hat's upon it--
It stands out in the hall.

NORTHERN LIGHT CAMP F-6

A. F. Laidlaw, Technical Foreman.

The first snowfall of the winter started us off on Timber Stand Improvement in a big way. There are about 150 men on liberation and thinning. T. F. Younggren, together with Construction Foremen Andersen and Issacson, is in charge of jack pine thinning, and T. F. Churchill with Construction Foremen Swannell and Croft, is taking care of white pine and spruce liberation. All of our hazard removal brush is burned, and the Mink Lake Road is completed so we can hit T.S.I. on the nose all winter. T. F. Horn has about 1700 acres marked to date, so we should be busy for awhile.

Lt. Speorry has joined the Army staff at this camp. It surely is nice for the Foresters to have somebody to take snipe hunting once in awhile. It is also convenient to have an extra girl to take out now and then--that is, if you're not too particular! You see, we're not just sure yet whether they sent the Lieutenant or his sister.

Now that the deer season is over, we can start breathing easy again. There certainly were plenty of deer taken out of this part of the Superior. Even at that, those Good Harbor good shots seem to have plenty of trouble hitting a deer!

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TWO VIEWS

Ed. Hamel, C. F., Day Lake F-32, Chippewa

Standing on this high hill viewing the surrounding LaCroix Lake country, I recall in comparison the view of some years ago and the view of the present.

Some thirty years ago and better, the sturdy Lumberjack cut and hauled the great virgin timber away to the mills. From time to time great fires laid waste the wonderous trees that grew there.

The view that comes before this old-timer now is one of great significance. The Civilian Conservation Corps, sponsored and approved by President F. D. Roosevelt, has taken the works of conservation and reclamation of the country's forests under the direct supervision of our own United States Forest Service. Young boys and men are brought into contact with the forest and the accumulated knowledge of the Forest Service.

The Forest Service and its helpers, the C.C.C., are reclaiming and reforesting the great areas that would certainly have gone to destruction under the old system.

To me, an old-timer who has lived in the forest, knows the forest, and loves those grand old trees, this work is one of the masterpieces of statesmanship our great and honorable President has given to us under the "New Deal."

NEWS ITEMS OF CAMP COOKS F-49
Manistique, Michigan

Harry D. Ball, has resigned from Company 686 to become the manager of the Cobblestone Inn in Manistique. His former comrades wish him the best of luck.

Lester Parcels has been appointed assistant to the educational adviser at Camp Cooks to replace Elmer Carlson, who resigned to reenter Northern State Teachers College.

The crew of Company 686 has dug and delivered its quota of 670 highland cedars for the nursery at Manistique.

W. C. Carroll arrived in Camp Cooks on December 4th to take over the position of camp educational adviser. A pleasing response to the educational program is being made by the men of the camp. Seventy-five men are enrolled in ten classes. Besides the classes several men are engaged in individual educational activities under the direction of advisers.

The men are making an extensive use of the library. One hundred seventy-five books have been checked out this month to date. A new library arriving in camp in the afternoon was practically all off the shelf before 'lights out'.

Two Dodge trucks have been returned from Fort Brady, where they were sent for repair, and the Fort Brady trucks have returned.

One of our genial technical foremen, Mr. Brigham, has been promoted to take charge of the fish and game work in the new southern district of the Forest, with headquarters at Manistique. He has the best wishes of the men of the camp for success in his new work. He promises to speak before the forestry class on some phases of his new work.

Lieutenant Cohen has returned to take up his duties after a short leave, during which he visited Detroit.

Leaders and assistant leaders who have been studying first aid under the instruction of Dr. Granger are preparing to take an examination on the course.

A new room for the canteen has been arranged at the south end of the mess hall by Quiggin and Brentich. Jack Russeau is meeting his customers at the new stand.

Clifton Blush was taken to the Shaw hospital at Manistique on December 17th, to have his tonsils removed. Dr. Ross performed the operation. Blush is expected back in camp on Tuesday.

The Camp Cooks basketball team gave a good account of itself in a game at Manistique, Thursday night with the Barker's Bakery team. The final score was 47-24 in favor of the Bakers.

We understand that Eugene Perkio, star basketball player and camp shiek, was seen in the company of three of the fair sex one night this week. There is safety in numbers, eh, 'Eggy'?

Several beautiful airplane models have been soaring about the camp and barracks. They are the handiwork of E. Ottosen, of Manistique. Several of his comrades have gotten the 'fever' and may be seen cutting and glueing about his table during the leisure hours.

The good wishes of the company go with the men who are leaving camp at the end of the month at the expiration of their enlistment.

The new technical foreman, Mr. Berry, has reported to Camp Cooks to replace Mr. Brigham. Mr. Berry comes from New Jersey, where he was foreman in the state CCC work. He is making his home in Manistique.

Earl Olmsted, Munising, has joined the company as cook. Wallace W. Wolf, Kipling, has joined the company as baker. Mr. Wolf, who recently received his discharge from the army, was stationed for some time in Hawaii.

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First-rate Publicity at Erosion Camp D. P. E. - 74
As reported by L. W. Frohock, Superintendent.

Erosion Control speeches have been made in connection with Corn-Hog and Clover-Prosperity Meetings to promote a better understanding of the work to be done and to provide a medium of contact to more farmers throughout the community.

Through the display of work pictures of various types of controls in business places as well as in our office to visualize to the farmers what we mean by the building of gully control structures.

Through the writing of articles for the press to better cover a larger area as to the aims and accomplishments of our camp.

Through the contemplation of directed inspection tours for the farmers and lectures given on their farms.

We hope during the winter months to be able to build a scale size model of the typical farm and model controls established on this farm.

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"The man who has the goods to sell,
And goes and whispers down a well,
Is not so likely to collar the dollars
As he who climbs a tree and hollers."

P U B L I C R E L A T I O N S

H. Adema, Technical Forester,

Camp Kenton, F-9, Kenton, Mich.

The old saying, "Charity begins at home", has been changed to read, "Public Relations begin at home." We have tried to put this into effect in two ways. During the hunting season, contact was made with as many of the hunters as possible. These men and women could see for themselves the actual work in the field and we could tell them why such activities were being carried on in the forest. Thus they were able to return to the cities with first hand information of the C.C.C. movement. In return, from them, the views of the people were received and many helpful suggestions gathered to help us in our future relations.

Then there are the forest workers, the C.C.C. men. Many camps, and we dare say most of them, have left the education of the C.C.C. enrollees up to the educational department. It is advisable for the foresters to work with the educational advisor, and conduct at least one course in general forestry. The men of the camps are the future voters, and it is our duty to give them at least the fundamentals of forestry, correlating them with the actual work they do in the field. Our program is so prepared and presented that we are offering a certificate to those attending the forestry classes. Therefore, in view of the value of public relations work, this camp has been putting across "public relations" at home, to the man of the future and of the present, the C.C.C.

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The above article is after our own heart. If all others will please go and do likewise our PR problem will all be solved. Perhaps more PR work has been done than we know. Space is open in the February number. It's all right to be modest individually, but we must let our light shine collectively. Definite understandings grow from face-to-face discussions.

"A fine morale can only be built up by personal contacts, by the human voice and the human smile, by getting into the hearts and souls of the people, the thought that they are a part of (forestry) and proud of it. All sorts of relationships are possible where there is an assembly of human beings working together. . . . ."(From the Paper Trade Journal)

Only by such work as has been done at Camp Kenton may the field of public relations be expanded beyond the physical limitations of the Forest Service personnel.

Let us hear more of what is being done to equip these new interpreters of the forest, the Triple C, to impart the knowledge they have gained through contact with the woods.

P. R., R. O.

On December 19th Webster W. ("Swede") Intermill bade farewell to the ranks of lonesome bachelors. He persuaded Miss Esther Mildred Friesth of Humboldt, Iowa, to forsake her prize winning culinary art to accept his please "for better or for worse". Miss Friesth was judged the champion breadmaker of the United States and the champion lute-fisk cook of Iowa in 1933 by the 4-H Club.

The Intermills will make their home in Rhinelander where "Swede" is connected with the Forest Supervisor's office having charge of planting on the Nicolet.

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Earl Yahnke, property clerk in the Supervisor's office, was married on December 8th to Miss Phyllis Wagner of Rhinelander. Miss Wagner taught in the Junior High School at Niagara, Wisconsin, before Earl persuaded her that a school of one pupil would be less troublesome.

Before settling down to prove the noble experiment that two can live as cheaply as one, the happy couple took a honeymoon trip to Madison and Earl's home in Richland, Iowa.

The Best Wishes of the Nicolet go to both of these newly-wed couples.

A GRAPHIC STORY FROM THE MIMEOGRAPH FORCE

By Howard L. Roltsch,
Mimeograph Operator.

Trained Fleas Travel 10,000 Miles in Six Months, - Save Punched Out "e's" and "o's" (and Jobs) for Stencil Cutters. Over One and a Quarter Million Copies Mimeographed from 5600 Stencils.

Yes Sir! "Chet" and "Bob" have done a lot of traveling. In figuring a report covering the past six months, they have averaged about 35 miles a day without leaving the Federal Building. Impossible? Well, who said anything about our "Winged Mercury Messengers", Chester Hammond and Bob Henry? We refer to our two pet fleas. They ride on the edges of the mimeograph drums and are trained to push the punched out "o's" and "e's" back into place. They also perform numerous other tricks which have saved many a stencil-cutter's job. During their travels of over 10,000 miles for the six months they have done their bit in running off about 5600 stencils, and mimeographing over one and one quarter million copies.

We have just received a new mimeograph machine and have been scouting around for another trained flea. Inasmuch as Gordon Jackson and I had named "Bob" and "Chet" we asked Viola Gieratz to select a name for the new flea and "Gene" was chosen, in honor of Gene Kobs. But here we are -- we have the name and the job but no flea. I hope our dear readers will help us in the search. Any flea which can equal the performances of our old faithful "Bob" and galloping "Chet" will receive an immediate appointment. Kindly refer all applicants to Room 516, Federal Building, Milwaukee, Wisconsin.

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Does any one have trouble with Form 7? What would you do when fourteen man-days are charged to Item 35, nursery for the care and feeding of wild turkeys? So did I. - C. J. Bower

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"Better to have a bit of harmless nonsense - if it interprets the times, than an exalted notion of what we accomplish." D. C. Bulletin.

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If we find but one to whom we can speak out our heart freely, with whom we can walk in love and simplicity without dissimulation, we have no ground to quarrel with the world or God.

--Robert Louis Stevenson

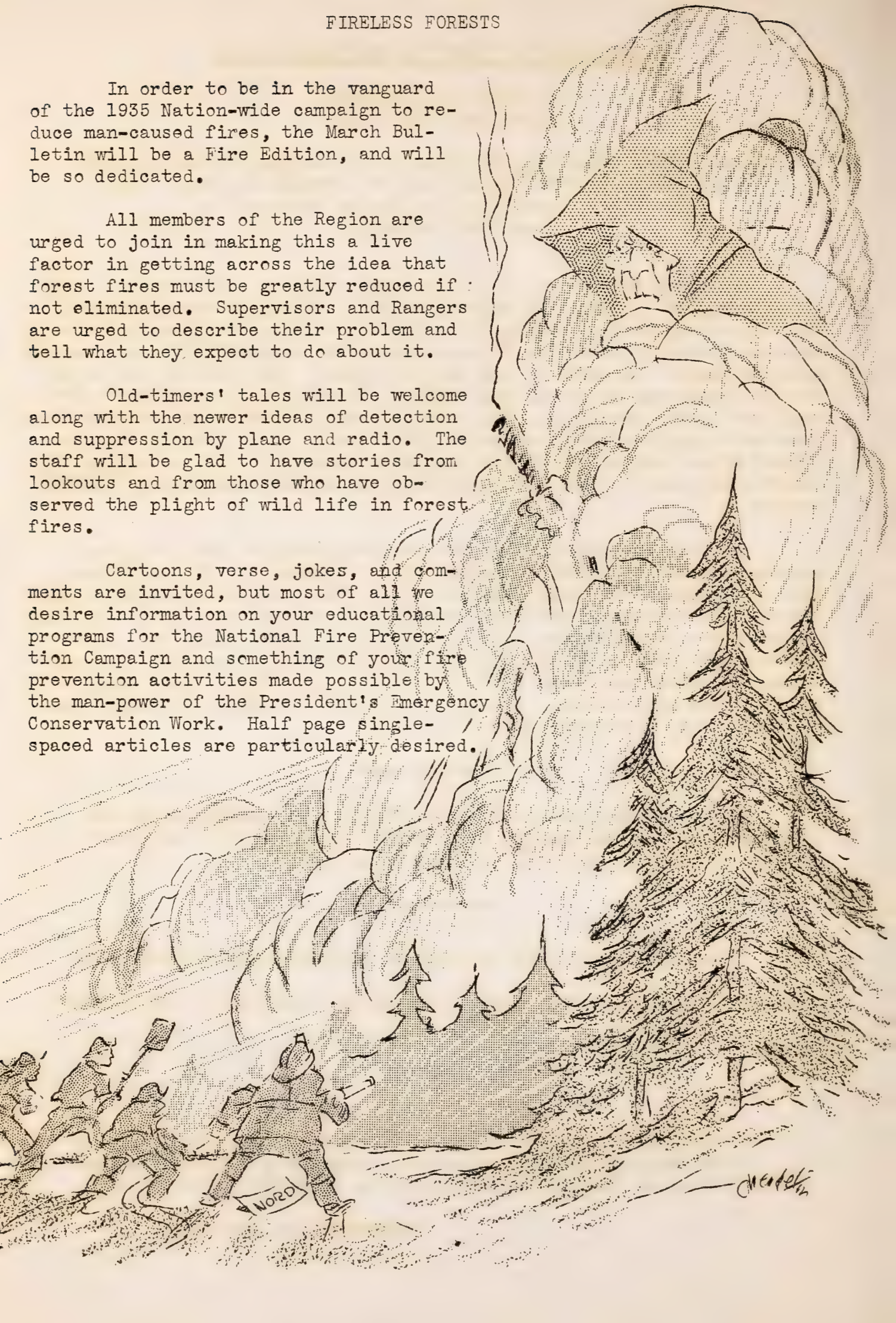
FIRELESS FORESTS

In order to be in the vanguard of the 1935 Nation-wide campaign to reduce man-caused fires, the March Bulletin will be a Fire Edition, and will be so dedicated.

All members of the Region are urged to join in making this a live factor in getting across the idea that forest fires must be greatly reduced if not eliminated. Supervisors and Rangers are urged to describe their problem and tell what they expect to do about it.

Old-timers' tales will be welcome along with the newer ideas of detection and suppression by plane and radio. The staff will be glad to have stories from lookouts and from those who have observed the plight of wild life in forest fires.

Cartoons, verse, jokes, and comments are invited, but most of all we desire information on your educational programs for the National Fire Prevention Campaign and something of your fire prevention activities made possible by the man-power of the President's Emergency Conservation Work. Half page single-spaced articles are particularly desired.



A New Year Arrival: FOREST RESEARCH DIGEST, Issued by the Lake States Forest Experiment Station, January, 1935.

RESEARCH - BASIS OF SOUND PRACTICE

The test of research is its application to the improvement of forest practice. The purpose of the Experiment Station is not fulfilled merely by publishing the results of its investigations. Unless the results find their way into every day work on the forest, the work is only half completed.

The aim of the Forest Research Digest is to bring to the attention of every field administrative officer possible improvements in the technical forest work, to acquaint them with the results of the Experiment Station's investigations and to build up a close and intimate understanding between those charged with administrative duties and those who are responsible for finding improved methods for performing those duties. It is also to serve as a means of keeping the the research men regularly in touch with the most recent developments in their field.

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ZON AS AID TO SILCOX

Raphael Zon, director of the Lake States Forest Experiment Station at St. Paul, Minnesota, has been transferred to Washington where he will be assistant forester and consultant to F. A. Silcox, chief of the U. S. Forest Service for at least three months. Zon will make his headquarters in Washington after January 1. ---The Forestry News Digest, January, 1935.

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"---------- Forestry is not silviculture; it is not forest economics it is not fire protection or forest management. These things are but tools; instruments, if you will. The basic, the fundamental concept of our public forestry policies, is to so handle our forest lands,-- which constitute one-third of the entire land area of the United States, -- that they shall affirmatively contribute to the permanent support of their fair share of the Nation's population. This is the real, the ultimate, job which faces foresters in the United States today."

(From an address by F. A. Silcox, Forester at Annual Meeting Assoc. of State Foresters Knoxville, Tennessee, October 17, 1934)

T R A N S P L A N T S

Assistant Forest Supervisor H. Phil Brandner of the Chippewa is on indefinite detail to the Regional Office. At present he is delving into the mysteries of the Regional Master Plan.

Harry V. Halvorson, who has been in a training position at the Regional Office has been assigned as Assistant Clerk on the Missouri, replacing Arthur J. Mead who recently resigned.

Carl J. Wendt, Assistant Clerk on the Chippewa, is detailed to the Regional Office on a training assignment.

Recreation Specialist Ray E. Bassett is making a visit to the Missouri and Illinois units and will assist in the preparation of recreational plans for those units.

Mrs. Dessa F. King, Chief Clerk in the Lumber Code Section of the Milwaukee Office, has accepted a transfer to the Washington Office. Miss Mary B. Hughes of Region 2 is transferring to Milwaukee to replace Mrs. King.

Supervisors Harmon of the Superior and McKennan of the Upper Michigan dropped in on the Regional Office, on their way back to their Forests after an enjoyable Holiday vacation.

S. D. (Andy) Anderson has moved his desk in the Milwaukee Office from the Branch of Lands to the Lumber Code Section and will now be hailed by the title of Associate Lumber Code Examiner.

Junior Forester Floyd T. Roberts, now on the San Juan in Region 2, is transferring to Region 9 and will be assigned to the Upper Michigan. He is scheduled to report to Supervisor McKennan about January 24th.

Max Melick, who has been heading up the Acquisition program on the Chequamegon, has reported to the Regional Office on detail.

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A beautiful balsam from Nicolet, Argonne, Three Lakes, cheered our Holiday "time in", and inspired a Christmas manuscript offering. It stood in a PR corner, the red tag on the topmost bough silently proclaiming correct Christmas cutting. One was also received by the Conservation Chairman, Wisconsin Federation of Women's Clubs. Thanks to the unknown donors.

MORE TREES TO ALL.

LAST LINES

E. W. Tinker and A. G. Nord are in Washington. Earl S. Peirce and H. C. McConnell in Iowa looking for new Units. S. E. Schoonover is on the West Coast, Chairman S. D. O. Auditing. R. E. Bassett in Missouri and Illinois on Recreation Studies. Willard Jones, Nursery Superintendent on detail to R. O. - handling Planting and Nursery Report.

The best wishes of the organization go to Mr. and Mrs. L. C. Tschudy - married December 20, 1934.

EROSION "washed out" a lot of material set up for this issue, including many Chippewa and other Forest classics; they will appear in February.

"Springs in the Ozarks," by Leslie S. Bean, Missouri, is set up for an early offering; "Recreation on the Huron", by Don Anderson, Technical Foreman, and "Plantation History," by Harry C. Turner, will appear soon.

"Beaver Control on Trout Streams," by T. W. Agnew, Technician, Pine River Camp, Wisconsin, has been held in prospect of a more technical publication; it has the O. K. of Dr. R. E. Trippensee, and will be in coming columns.

We have also in the offing some splendid articles by Albert Van S. Pulling, Technician, Park Falls, Wisconsin, including "Fur in Forest Management," "The Rabbit in Forest Management," "Moose Records in Wisconsin," "The 1934 Deer Season," and "Stream Improvement in National Forests."

Announcements

MAY - The Wild Life Number. Reports, appeals and resolutions welcome from bear, deer, moose, wild turkeys, rabbits, rainbow trout, and Wild-life Managers - from the Great Lakes to the Southern Ozarks.

APRIL - Will be devoted to Public Relations, unless other applications are received. A chance to tell how you are winning the public.

MARCH - CONTROL OF MAN-CAUSED FIRES CAMPAIGN. See Special Page.

FEBRUARY - To be dedicated to the CCC. Stories eagerly awaited from Triple C's. Why not put your camp on the cover page by sending us the most colorful photograph in the Region? This number will contain an article, "The C. C. C. and Prevention of Social Wastage of Youth" by Inspector W. O. Stephens, who writes:

"I enjoy the Bulletin very much and read every word of it. Wish you continued success. Best wishes for the happiest and best New Year we have ever enjoyed."

H A P P Y N E W E R A T O A L L.